

IN THE SPECIFICATION

- 1) Please amend the paragraph on Page 1, lines 6-8, as follows:

In the present invention, further improvements are made in the synthesis of nanopowders by applying a high intensity magnetic field to electrodes of precursor material during the time that an electrical discharge arc is generated between the electrodes. Higher production yields thereby are attained than that achievable by the above prior art nanopowder synthesizing systems. Further improvement is obtained if a magnet insert of coating precursor material is used to reduce agglomeration of the nanopowder particles.

- 2) Please amend the paragraph on Page 4, line 20, as follows:

“High Intensity Magnetic Field” shall mean a magnetic field in the range of 0.50 or more Tesla.

- 3) Please amend the paragraph on Page 4, lines 27-32, as follows:

Referring to FIG. 1, a nanopowder synthesis system 20 is illustrated with a reaction chamber 21 having a solenoid magnet 22 held in place within the reactor vessel 21 by mechanical struts 23a and 23b. The solenoid magnet 22 is designed to provide high intensity magnetic fields in the range of 0.50-5.0 Tesla. It is to be understood that while a solenoid magnet is referred to in the preferred embodiment, it is the magnetic field which is generated rather than the shape of the magnet which is of importance to the invention.

- 4) Please amend the paragraph on Page 5, lines 2-5, as follows:

The solenoid magnet 22 is a magnet which creates a high intensity magnetic field principally along its major axis. The magnetic field may be varied by varying the power supplied to the magnet. Alternatively, the number of windings, or the diameter of the windings of the magnet could be altered to vary the magnetic field

5) Please amend the paragraph on Page 6, line 25 – Page 7, line 4, as follows:

In operation, one or more of the gas valves 28a and 28b are opened to respectively allow desired amounts of reaction gas from gas source 26a and quenching gas from gas source 26b to enter the reaction chamber 21. The gas is recirculated by the blower 44 in the closed loop system comprising the reaction chamber 21, conduit 51, collection vessel 47, conduit 45, and conduit 48. The charging power supplies 35 and 40 are energized to respectively charge the pulsed power supplies 30 and 37. The timing control system 42 thereupon is operated to trigger pulsed power supply 30 and pulsed power supply 37 in a timed relation which ensures that a high power pulsed electrical discharge arc occurs between the electrodes 24a and 24b in the presence of a pulsed, high intensity magnetic field. The corresponding pulsed plasma created by the ablation of the electrodes 24a and 24b reacts/quenches with the gas to form nanopowder. The nanopowder in turn flows out of the reaction chamber 21, through the conduit 51, and into the collection vessel 47. The filter 46 acts to filter out the nanopowder which is subsequently collected in the collection jar 53.